

IN THE CLAIMS

Please amend the claims as shown below.

1. (Previously Presented) A laser system for treating features on the skin of a patient with laser light comprising:

an imaging subsystem that generates images of a region of the skin and automatically determines responsive to the images if the region comprises a feature on the skin to be treated and if so, a location of the feature in the region;

a laser;

laser optics that focuses light from the laser onto a feature located by the imaging subsystem; and

a controller, that when a feature is located, controls the laser to radiate a pulse of laser light that is focused by the laser optics to a spot localized about the feature.

2. (Previously Presented) A laser system according to claim 1 comprising a light source that illuminates regions imaged by the imaging subsystem with light for which the features to be treated have a reflectance different from that of clear skin so that a feature to be treated appears as a contrasted sub-region of an imaged region of the skin.

3. (Original) A laser system according to claim 2 wherein the spectrum of the light radiated by the light source is tunable.

4. (Previously Presented) A laser system according to claim 1 wherein the spot to which the laser is focused has an area having a diameter substantially equal to a diameter of an area occupied on the skin by a feature to be treated, multiplied by a factor greater than one.

5. (Original) A laser system according to claim 4 wherein the factor is less than 2.

6. (Original) A laser system according to claim 4 wherein the factor is less than 1.5.

7. (Previously Presented) A laser system according to claim 4 wherein the factor is greater than about 1.2.

8 - 9. (Cancelled)

10. (Previously Presented) A laser system according to claim 1 wherein the imaging subsystem comprises:

at least one photosensitive surface that generates signals responsive to an image formed thereon; and

imaging optics that images light that it collects on the at least one photosensitive surface;

wherein, the imaging optics are moved relative to the skin so as to scan the region and image sub-regions in the scanned region onto the at least one photosensitive surface.

11. (Original) A laser system according to claim 10 wherein the imaging optics has a focal point and the spot to which the pulse of laser light is focused is centered at the imaging optics focal point.

12. (Previously Presented) A laser system according to claim 11 wherein the controller controls the laser to radiate a pulse of light only if a feature to be treated is determined to lie substantially within the spot to which the laser pulse is focused.

13. (Previously Presented) A laser system according to claim 1 comprising at least one photosensitive surface on which images of the skin region are imaged and that generates signals responsive the images and circuitry that receives the signals and processes them to locate contrasted sub-regions in the imaged skin region to determine if the region comprises a feature to be treated.

14. (Original) A laser system according to claim 13 wherein the at least one photosensitive surface comprises a single photosensitive surface

15. (Original) A laser system according to claim 14 wherein the photosensitive surface comprises a quadrature detector.

16. (Original) A laser system according to claim 15 wherein signals from the quadrature detector are used to determine whether a contrasted sub-region imaged on the quadrature detector is substantially centered within the spot to which the laser pulse is focused.

17. (Previously Presented) A laser system according to claim 15 wherein signals from the quadrature detector are used to determine whether a contrasted sub-region imaged on the quadrature detector is larger than a predetermined minimum size consistent with the size distribution of areas occupied on the skin by features to be treated.

18. (Previously Presented) A laser system according to claim 15 wherein the photosensitive surface additionally comprises at least two photodetectors located adjacent to opposite sides of the quadrature detector.

19. (Previously Presented) A laser system according to claim 18 wherein if any of the photodetectors adjacent to sides of the quadrature detector generates a signal responsive to a contrasted sub-region imaged on the photosensitive surface, the circuitry determines that a portion of the sub-region lies outside the spot to which the laser pulse is focused and the laser is not energized by the controller.

20. (Original) A laser system according to claim 13 wherein the at least one photosurface comprises a first and a second photosensitive surface.

21. (Original) A laser system according to claim 20 wherein the first photosensitive surfaces comprises a quadrature detector.

22. (Previously Presented) A laser system according to claim 21 wherein the circuitry processes signals from the quadrature detector to determine whether a contrasted sub-region imaged on the quadrature detector is substantially centered within the spot to which the laser pulse is focused.

23. (Previously Presented) A laser system according to claim 21 wherein the circuitry uses signals from the quadrature detector to determine whether a contrasted sub-region imaged on the quadrature detector is larger than a predetermined minimum size consistent with the size distribution of areas occupied on the skin by features to be treated.

24. (Previously Presented) A laser system according to claim 20 wherein the second detector comprises a photodetector having a mask that blocks light from impinging on an area located at its center.

25. (Previously Presented) A laser system according to claim 24 wherein if the photosensitive surface generates signals responsive to a contrasted sub-region imaged on the photosensitive surface, the circuitry determines that a portion of the sub-region lies outside of the spot to which the laser pulse is focused and the laser is not energized by the controller.

26. (Previously Presented) A laser system according to claim 10 wherein the imaging optics comprises an objective lens system having a focal point that collects light from regions imaged by the imaging subsystem and wherein the focal point of the imaging optics is the focal point of the objective lens system.

27. (Original) A laser system according to claim 26 wherein the imaging system comprises an ocular lens system that receives light collected by the objective lens system and images the received light on the at least one photosensitive surface.

28. (Original) A laser system according to claim 27 wherein the objective lens system is rotatable about an axis of rotation that intersects the optic axis of the objective lens system.

29. (Original) A laser system according to claim 28 wherein the laser optics comprises a collimating lens system that receives light radiated by the laser, which it collimates and transmits parallel to the axis of rotation.

30. (Original) A laser system according to claim 29 wherein the imaging optics comprises a reflector that reflects the collimated laser light towards the objective lens system along a direction parallel to the optic axis of the objective lens system so that the laser light is focused to a spot at the focal point of the objective lens system.

31. (Original) A laser system according to claim 30 wherein the reflector is a beam splitter.

32. (Original) A laser system according to claim 31 wherein the ocular lens system and the at least one photosensitive surface are positioned on a side of the reflector opposite to the side of the reflector on which the objective lens system is located.

33. (Original) A laser system according to claim 30 wherein the reflector is a mirror.

34. (Original) A laser system according to claim 33 wherein the ocular optics and the at least one photosensitive surface are stationary with respect to the axis of rotation.

35. (Original) A laser system according to claim 34 comprising a beam splitter positioned between the collimating lens and the mirror and wherein light collected by the objective optics is reflected by the mirror along the axis of rotation towards the beam splitter, which reflects some of the collected light incident on it towards the ocular lens system.

36. (Previously Presented) A laser system according to claim 28 comprising a motor or actuator that is coupled to the objective lens system and rotates the objective lens system with an oscillatory motion about the axis of rotation, so that the objective focal point moves back and forth along a planar arc having a fixed length.

37. (Previously Presented) A laser system according to claim 10 wherein the imaging optics and the at least one photosensitive surface are mounted within a hand held unit.

38. (Original) A laser system according to claim 37 wherein the light source is mounted in or on the hand held unit.

39. (Previously Presented) A laser system according to claim 37 wherein the laser is mounted within the hand held unit.

40. (Previously Presented) A laser system according to claim 37 wherein the controller is mounted in the hand held unit.

41. (Previously Presented) A laser system according to claim 37 comprising a power source mounted in the hand held unit.

42. - 56. (Cancelled)

57. (Previously Presented) A method for treating a feature on the skin of a patient with laser light comprising:

acquiring an image of a region of the skin with an imaging system comprising circuitry that automatically determines responsive to the image if the region comprises the feature, and if so, a location of the feature in the region and generates a signal responsive to the presence of the feature; and

controlling a laser responsive to the signal generated by the imaging system to focus a pulse of laser light energy to a spot that covers substantially completely the feature.

58. (Previously Presented) A method according to claim 57 wherein the feature is a hair follicle.

59. (Previously Presented) A method according to claim 58 wherein the energy is sufficient to cauterize the hair follicle.

60. (Previously Presented) A laser system according to claim 1 wherein the imaging system is mounted within a hand held unit.

61. (New) A laser system for treating features on the skin of a patient with laser light comprising:
- a light source for illuminating the skin;
 - at least one photosurface that generates signals responsive to light incident thereon;
 - optics that automatically scans a focal region of the optics over the patient's skin and images light from the light source reflected by the skin on the at least one photosurface;
 - a laser; and
 - a controller that receives signals generated by the at least one photosurface responsive to the imaged light and processes the signals to determine presence of localized contrasted regions on the skin and autonomously decides responsive to the determination whether the skin comprises a feature to be treated and where it is located;
 - wherein if such a feature is located, the controller autonomously controls the optics and laser to focus light from the laser for treating the feature, to a spot localized about the feature.
62. (New) A laser system according to claim 61 wherein the photosurface comprises a quadrature detector.
63. (New) A laser system according to claim 62 wherein signals from the quadrature detector are used to determine whether a contrasted sub-region imaged on the quadrature detector is substantially centered within the spot to which the laser light is focused.
64. (Previously Presented) A laser system according to claim 61 comprising a motor or actuator that rotates at least a portion of the optics with an oscillatory motion so that the focal region moves back and forth along a planar arc having a fixed length.